

with his own hands; many excellent gratings were made with a ruling engine of his own device, the result of twenty-five years, modification and improvement. In this engine the diamond point is brought very gradually into contact with the surface to be ruled, so that the risk of disaster from its breaking is entirely avoided. When Röntgen announced the discovery of the X-rays, Lord Blythswood had already obtained photographic effects through opaque objects, and had come very near to making the discovery himself. His principal researches were in spectrum photography, the Zeeman effect, and in radio-activity. During the last few years of his life he was much interested in the problem of flight, and in conjunction with Mr. Scoble he invented an engine worked by compressed air, and which developed one-half of a horse-power, although weighing only two pounds.

He had for some time been suffering from heart weakness, and died on July 8 at his seat of Blythswood.

Lord Blythswood was elected a Fellow of the Royal Society in 1907, and a Fellow of the Royal Astronomical Society on 1875 April 9.

CECIL GOODRICH JULIUS DOLMAGE was descended from a Protestant refugee family which settled in Ireland at the beginning of the eighteenth century. He was born in Naples in 1870. He received his early education at Ipswich School and from private tutors, and at the age of seventeen he passed successfully his examinations for the army. But an accident following almost immediately upon this success, weakened his constitution and altered the course of his career, and, as it has since proved, cut short a life that was full of promise.

He was, however, within a year or so of this unfortunate mishap, which so changed his life, able to enter Trinity College, Dublin, and after a distinguished course there he graduated, taking high honours in history and political science, in 1893, and, later, the degrees of M.A. and LL.D.

He was called to the Irish Bar in 1897, and to the Bar of the Inner Temple in 1903.

Mr. Dolmage wrote many articles and essays on historical and astronomical subjects. His book, *Astronomy of To-day*, appeared but a few weeks before his death last autumn, and showed him to be gifted with the power of a sympathetic insight and a facile pen.

He was only thirty-eight when he died from a decline which followed upon the unfortunate accident of his earlier years.

He was elected a Fellow of the Society on 1898 November 11.

ROBERT LEWIS JOHN ELLERY was born at Cranleigh in Surrey on the 14th of July 1827. In early life he studied medicine, but devoted much of his leisure to astronomy and meteorology. He first went to Australia in 1851, and superintended in 1853 the erection of a small observatory at Williamstown for the Government of Victoria, which was constituted a separate colony in that

year, having previously formed a part of New South Wales. The new establishment was removed to a more suitable site at Melbourne in 1863, and was provided in 1870 with a Grubb reflector, 4 feet in aperture and of 20 feet focal length. Mr. Ellery continued to direct its operations until 1895. Eight volumes of astronomical and twenty-eight of meteorological appeared under his directorate, besides two valuable star-catalogues, which were published in 1874 and 1889, and contain the places of 1227 and 1211 stars respectively. Besides his astronomical and meteorological work, Mr. Ellery was much occupied from 1857 to 1870 in the geodetic survey of the colony. Many separate papers by him (chiefly on observations of comets and casual phenomena) appeared from time to time in the *Monthly Notices* of the Royal Astronomical Society, and in the *Transactions* of the Royal Society of Victoria; he held for twenty-three years the post of President of the latter. In addition to all this, he organised and for a time commanded the Victorian Torpedo Corps, now called that of the Submarine Mining Engineers; in retiring from this in 1889 the rank of lieutenant-colonel was conferred upon him. On completing his sixty-eighth year, Mr. Ellery resigned the Directorship of the Observatory, but continued to reside in Melbourne, and held the post of Chairman of the Board of Visitors until his death, which occurred on the 14th of January 1908. Being on a visit to England in 1875, he was present, with the other Directors of southern observatories (Stone of the Cape, and Russell of Sydney) at the dinner given by Airy on the occasion of the bi-centenary of the foundation of the Royal Observatory on the 10th of August. His successor in the Directorship at Melbourne was Mr. Baracchi.

Mr. Ellery was married twice; the first time in 1853, soon after he came to Australia; but his wife dying in 1856, he married two years afterwards a daughter of Mr. Shields of Launceston, Tasmania.

He was elected a Fellow of this Society 1859 July 8, and of the Royal Society in 1873.

W. T. L.

EDWARD GAY, the younger son of James Gay, was born at Dulwich on 1837 December 5. In 1854 he was nominated to a clerkship in the Secretary's department of the General Post Office. He afterwards gained a clerkship at the Treasury, and while holding this appointment he matriculated at Magdalen Hall, Oxford, where he took his degree of B.A. in 1861, and of M.A. in 1863. In 1864 he was selected by Sir Charles Trevelyan to serve in the Financial department of the Indian Civil Service, where he passed through the various grades, until in 1879 he became Accountant-General, Bombay, and Commissioner of Paper Currency. Nine years later he became Controller and Auditor-General, and Head Commissioner of Paper Currency. Mr. Gay's official work allowed but scanty time for astronomical pursuits, but he was always much interested in following the various developments. In 1876 he married Ellen, third daughter of Mr. Thomas Nelson, Waterfield, formerly head of the Secret Political Department in the India Board. In 1891 Mr. Gay retired, and made his home at Oxford